

Nazarbayev University Modification Form for Programs and/or Courses

1. Program Details ¹		
1.1 Program Title:	PhD in Science, Engineering and Technology	
1.2 School:	School of Engineering / School of Science and Technology	
1.3 Department:		
2. Modifications Proposed		
2.1 Type: Major <input type="checkbox"/> Minor <input checked="" type="checkbox"/>	2.2 Effective Date: Fall 2019	2.3 Collaborative ² (Yes/No): Yes
2.4 Summary of modifications		
#	Modifications recommended	Rationale
1	Allow faculty from the School of Mining and Geosciences to participate as “Lead Supervisors” in the PhD in Science, Engineering and Technology program.	<ul style="list-style-type: none"> The PhD program in Science, Engineering and Technology has been operating for the past 4 years as a joint program between the School of Engineering and the School of Science and Technology. One of the key research areas of the program is referred to as Energy Engineering, covering aspects of technologies dealing with exploration and production of conventional and non-conventional sources of energy. The School of Mining and Geosciences (SMG) is very well aligned with this research area since its main research interest focuses on prospecting, extracting and processing of natural resources. SMG has three departments, including the Department of Petroleum Engineering, Department of Mining Engineering and Department of Geology. In addition to the alignment in the energy sector, the Department of Mining Engineering has courses of mutual interests with SST and SEng such as Robotics and Automation, Digital Mine, Data Science/Data Analytics and Geotechnical Engineering. Core courses in SEng/SST Joint PhD program (Mathematics and Statistics; Research Methods; PhD proposal development) are also of interest to SMG PhD candidates and will be considered as such. Additional benefits to SMG joining the PhD program are that PhD candidates in the three

¹ An updated version of the program and/or course specification must be provided indicating the proposed modification using tracked changes.

² A collaborative program is one that is delivered in cooperation with another School or with a partner university. If a program is collaborative, the proposed modifications should be discussed and agreed upon with the partner.

	<p>Schools could expand their elective courses pool to include courses from the three schools in a manner that will strengthen the candidates' knowledge theoretically, and practically.</p> <ul style="list-style-type: none">• Currently faculty of SMG serve in the role of Co-Supervisors of PhD students in the program and these faculty have formal interest in proposing their own research projects for prospective PhD students. Therefore, the inclusion of SMG as partner of the PhD in Science, Engineering and Technology is a natural step towards the integration of engineering and science disciplines of Nazarbayev University in a unique multidisciplinary and cross-disciplinary successful PhD program.• By integrating SMG into the joint SEng-SST PhD program, resources and efforts could be shared and more effectively used to the mutual benefit of the three schools and to the university in general. More importantly, a PhD degree issued in any of three schools will be unique in the science and engineering disciplines at Nazarbayev University. <p>Therefore, this Minor Amendment intends to override previous Minor Amendment approved by SEng T&L Committee on 2018 which enforced that "Lead Supervisor" must be from SEng or SST schools, while the Internal Co-Supervisor can be from another school or research center of NU. This Minor Amendment proposes to return to original regulation existent within program proposal approved in 2016 which establishes that at least "Lead Supervisor" or "Internal Co-Supervisor" must be from one of the two Schools (SEng or SST), allowing now faculty from School of Mining and Geosciences (SMG) to become "Lead Supervisors" of our PhD students as needed. With this measure we want to facilitate the participation of our colleagues from SMG in the PhD on Science, Engineering and Technology program starting in 2019.</p> <ul style="list-style-type: none">• Note: <i>This Minor Amendment is supported</i>
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		<p>on Clause in Section 3 “Definitions”, sub-section 3.6 “Minor Modifications”: “Course Assessment Methods and/or weightings” of Guidelines for Modifications to Programs and Courses, approved by AC, Minutes #39, 17-June-2015.</p>
	<p>Eliminate the requirement of: “One perfect-bound copy of each PhD thesis shall be lodged in the SDO.” and “One permanent-bound copy of each PhD thesis shall be lodged with the University library.” as established in current “PhD in Science, Engineering and Technology Thesis Format Regulations” approved by AC on 2016. It is proposed that instead, due to space and maintenance capacity, the SDO and University library receive ONLY one electronic copy version in PDF.</p>	<p>The PhD in Science, Engineering and Technology program has just started to produce its first graduates (1 in 2018), but has scheduled at least 5 more during 2019. During the elaboration and approval of the “PhD in Science, Engineering and Technology Thesis Format Regulations” back in 2016, there was not limitations in space and budget for hard-copy book-keeping in NU Library and School Office. With passing years, NU Library has adopted a Repository system and policy that is currently receiving electronic copies of theses and offering to public audience for larger diffusion of research material produced at NU. Additionally, since 2016, the School Office in the School of Engineering has suffered several physical transformations and space availability is now an issue. Therefore, NU Library and School Office would be benefited from a new policy in which final versions of new PhD theses are only delivered in electronic format.</p> <ul style="list-style-type: none"> • Note: This Minor Amendment is supported on Clause in Section 3 “Definitions”, sub-section 3.6 “Minor Modifications”: “Course Assessment Methods and/or weightings” of Guidelines for Modifications to Programs and Courses, approved by AC, Minutes #39, 17-June-2015.
<p>3. School Approval</p>		
<p>3.1 Teaching and Learning Committee/or equivalent (Chair’s signature):</p>	<p>3.2 Date: <u>28.03.2019</u> Minutes # <u>3</u></p>	
<p>3.3 Dean’s signature:</p>	<p>3.4 Date:</p>	
<p>4. Academic Quality Committee (for major modifications only)</p>		

4.1 Academic Quality Committee Recommendation:

4.2 Chair's signature:

4.3 Date: